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PRE-APPEAL BRIEF REQUEST FOR REVIEWDocket Number (Optional)
05-828

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Application Number
10/552,220Filed
10/6/05on November 6, 2007Signature /A. Blair Hughes/Typed or printed
name A. Blair HughesFirst Named Inventor
lpArt Unit
1765Examiner
Ahmed

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor./A. Blair Hughes/

Signature

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)A. Blair Hughes

Typed or printed name

☒ attorney or agent of record.Registration number 32,901312-913-2123

Telephone number

☐ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____

November 6, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below*.☐ *Total of _____ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 05-828)

In the Application of:)	
)	
Kam Fuk Derek IP)	Examiner: Shamim Ahmed
)	
Serial No. 10/552,220)	
)	Group Art Unit: 1765
Filed: October 6, 2005)	
)	Conf. No. 6510
Title: Method for Producing a Laser Mark on Reflective Material)	
)	

Mail Stop Appeal
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

PRE-APPEAL BRIEF REQUEST FOR REVIEW REMARKS

Pre-appeal brief review is requested for the above application. This paper sets forth Applicant's concise statement of clear errors in the Examiner's final rejection. Claims 1-10 stand rejected in the Final Office Action dated June 28, 2007 for obviousness.

I. BACKGROUND

The application includes a single independent claim 1 which is reproduced below.

1. A method for producing a laser mark on reflective material, by which the laser mark provided with a pattern that may be processed and observed is formed on the reflective material with reflective bodies, comprising in accordance with the pattern a laser beam selectively scans and irradiates the reflective bodies at an incident angle, so that the irradiated surfaces of the reflective bodies are vaporized to form rough surfaces, while the non-irradiated surfaces of the reflective bodies are still of reflective surfaces, thereby the pattern is formed on the laser mark through the combination of dark spots corresponding to the rough surfaces and bright spots corresponding to the reflective surfaces, and may be observed at the incident angle of the laser beam.

II. THE OBVIOUSNESS REJECTIONS

The Examiner rejected claims 1-9 under 35 U.S.C. §103 (a) as being unpatentable over Wang et al. (USP 6,217,175) in view of Yamazaki et al. (USPA 2004/0224449). The examiner rejected claim 10 for obviousness over in view of the same two references and the Applicant's admission. Claims 1-10 are non-obvious at least because Wang does not disclose marking a layer with a laser at a non-perpendicular angle to mark a surface. Claims 1-10 are also

independently non-obvious because the combination of Wang and Yamazaki would never have been made by one skilled in the art at the time of the invention at least because Yamazaki is prior art that is not analogous to Wang or to the claimed invention.

A. Wang Does Not Disclose Every Feature The Examiner Relies Upon

It is the examiner's position that Wang teaches all of the features of independent claim 1 at column 2, lines 36-53 and at Figure 2 except for an explicit recitation that the irradiated surface forms a rough surface and the non-irradiated surface remains reflective. The cited Wang excerpt is reproduced immediately below.

Portions of the retro-reflective layer 104 may be unmarked while other portions are marked. FIG. 2A illustrates one embodiment of an unmarked retro-reflective layer 200 while FIG. 2B illustrates one embodiment of the marked retro-reflective layer 250. In the unmarked retro-reflective layer 200 shown in FIG. 2A, incident light such as light ray 204 enters an unmarked bead 208 where the light ray 204 undergoes refraction, reflection and a second refraction as the light ray 204 exits the unmarked bead 208. After two refractions and a reflection, light ray 204 exits the unmarked bead 208 in the same direction in which the light beam 204 was originally incident. An "on axis" light ray 212 is illustrated as being incident on an undamaged bead 216 at an angle normal ("on axis") to the surface of the retro-reflective layer 200. The "on axis" light ray 212 exits the unmarked bead 216 at an angle normal to the surface of the unmarked retro-reflective layer 200 thereby directing light back to the light source.

The examiner relies upon this Wang excerpt for disclosing laser marking on a reflective material wherein the laser beam irradiates on the material at an incident angle and reflected in the same direction as the original incident angle. However, this excerpt of Wang does not discuss how a laser interacts with the reflective material. Instead, the excerpt is a discussion about how light passes into the object and back to the user's eye. The Applicant acknowledges that Wang does disclose marking a layer with a laser that is perpendicular to the surface being treated. (Col. 4, lines 1-11). However, Wang does not disclose using a laser at a non-perpendicular (incident) angle to mark a surface as the claims require. For at least these reasons, the combination of Wang and Yamazaki does not disclose all of the features of the claimed invention and the examiner's rejection cannot be sustained because there is no prima facie case of obviousness.

B. Yamazaki Is Non-Analogous Art

The examiner's obviousness rejection also cannot be sustained because Yamazaki is prior art that is not analogous to Wang nor to the claimed invention. Therefore, the Yamazaki reference is not available to the examiner as prior art against the claimed invention and the examiner's obviousness rejection cannot be sustained.

Only art that is analogous to a claimed invention may be employed in an obviousness determination. *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992). Prior art is not analogous if (1) the art is not from the same field of endeavor as the claimed invention – regardless of the problem addressed; and (2) the prior art reference from another field of endeavor is not pertinent to the particular problem faced by the inventor. *In re Deminski*, 796 F.2d 436, 442 (Fed. Cir.1986). The test for non-analogous art is met by Yamazaki.

(1) Yamazaki is not art from the same field of endeavor

The current invention is related to producing a visible mark on a reflective material with a laser beam in order to prepare an anti-counterfeiting label. Wang is similarly related to using a laser beam to mark on a reflective material to form security labels.

Yamazaki, on the other hand is related to using lasers in an annealing process that converts an amorphous semiconductor film into a crystalline film by irradiating both side of the amorphous film with a laser. (See Yamazaki ¶0020). The annealing method is used to prepare crystalline semiconductor films that are then used to manufacture thin film transistors. (See Yamazaki at ¶0004). Clearly the first element of the non-analogous art test is met because the amorphous semiconductor film annealing methods of Yamazaki are in a field of endeavor that is not the same as the counterfeiting label manufacturing methods of the claimed invention.

(2) Yamazaki is not pertinent to the problems faced by the inventor

A prior art reference that is not in the same field of endeavor is conclusively non-analogous if the purposes and uses of the invention and the prior art devices are different. *See In re Clay*, 966 F.2d at 659-60. A reference is not pertinent if because of the matter with which the reference deals, it would not have logically commended itself to the inventor's attention. The second non-analogous art test element is also met by Yamazaki.

i. Problems faced by the inventors

Some of the possible problems possibly faced by the Applicant's in developing their invention and recited in the specification include:

- devising methods for preparing a security label that is difficult to counterfeit.
- devising methods for preparing security labels that are applicable to polyhedral reflective bodies.

ii. Yamazaki purposes and uses are different

Yamazaki is not pertinent to the problems faced by the inventors. In particular, Yamazaki discloses using a laser to anneal, i.e., crystallize the entirety of both surfaces of an amorphous film. In addition, Yamazaki does not disclose or suggest that the laser annealing results in an

annealed surface that is rough in comparison to the non-annealed surfaces. Moreover, Yamazaki does not appear to suggest that any of the amorphous surface remains non-annealed. i.e., there no untreated portions of the layer.

After applying the non-analogous test for prior art above, it is clear that Yamazaki satisfies the test. The designer of a new anti-counterfeiting label manufacturing methods, seeking to solve the problems solved by the inventors of the presently claimed invention, would not have been led, at the time of the present invention, to consider non-analogous prior art of Yamazaki related to laser annealing methods for semiconductor layers. The examiner's rejection of claims 1-10 for obviousness over Wang in view of Yamazaki cannot stand as Yamazaki is non-analogous art that is unavailable to the examiner.

C. Yamazaki Does Not Disclose Forming A Rough Surface

If Yamazaki is given consideration, then claims 1-10 are still non-obvious because the combination of Wang and Yamazaki does not disclose using a laser to form a rough surface. The examiner relies upon paragraph 0059 of Yamazaki for disclosing using a laser to irradiate a surface to form a rough surface. However, Yamazaki does not expressly disclose the formation of a rough surface on the laser treated layer.

The examiner apparently misunderstand paragraph 0059 of Yamazaki. The "reflective surface 304" that includes an "uneven surface" discussed in the paragraph is not the layer being crystallized with a laser. Instead, as shown in Figure 3, reflective surface 304 is a mirror that reflects laser light back towards the underside of the layer undergoing laser crystallization. Thus all that paragraph 0059 suggests is that the mirror surface 304 can include an uneven surface. The paragraph does not disclose or suggest that a laser imparts the layer being crystallized with a rough surface. For this reason as well the examiner's obviousness rejection cannot be sustained because Wang and Yamazaki fail to disclose all of the features of the claimed invention.

Respectfully submitted,

McDonnell Boehnen Hulbert & Berghoff

Date: November 6, 2007

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